

When Centrus was installed, sample data files were copied from the installation disc to a directory on your computer's hard drive, usually **C:\Program Files\QMS\Centrus2\Tutorial\**. These files are:

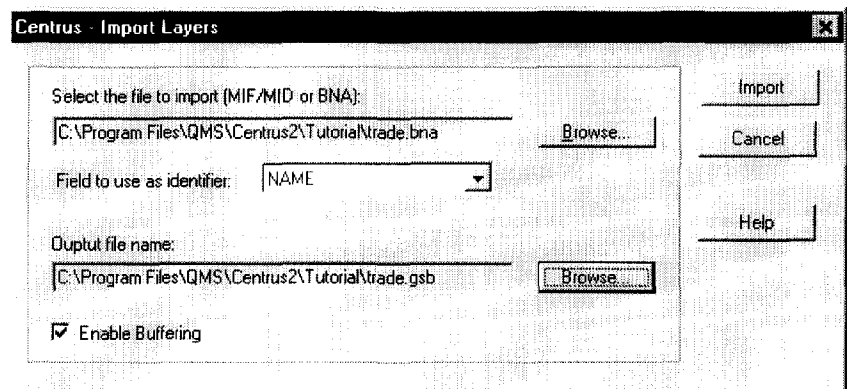
- trade.bna
- trade.gsb
- Stores.dbf
- Customer.dbf

## Import Point-in-Polygon and Closest Site Layers

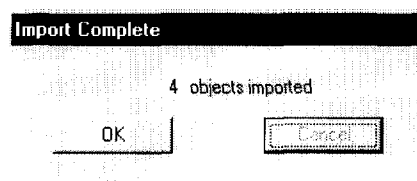
To use the Point-in-Polygon and Closest Site modules, you need to import *layers*—spatial data files containing information about specific geographic features and locations.

### To Import a Point-in-Polygon Layer

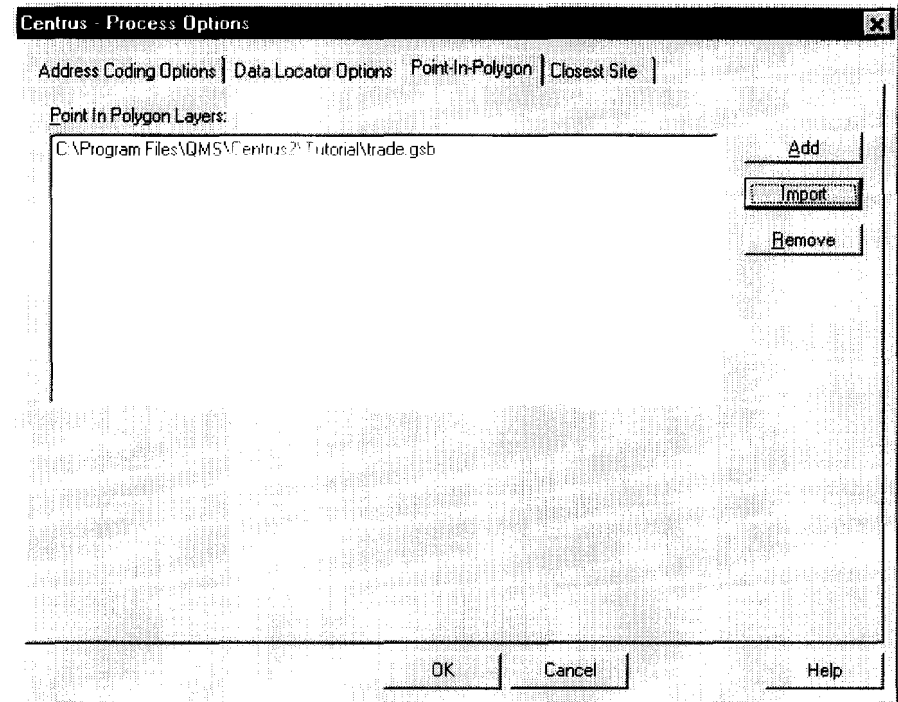
1. From the Process menu, choose **Options**. The Process Options dialog will appear.
2. Click the Point-in-Polygon tab on the Process Options dialog.
3. Click the **Import** button. The Import Layers Dialog will appear.
4. Under *Select the file to import*, click the **Browse** button and select the file **trade.bna** from the **Tutorial** directory. (This is a polygon file created in Atlas GIS and exported as a BNA file using Atlas Import/Export.)



5. Under *Output file name*, click the **Browse** button and specify an output file named **trade.gsb**.
6. Click **Import** to begin importing the file. Once the import process is complete you will see a dialog indicating that four objects were successfully imported.

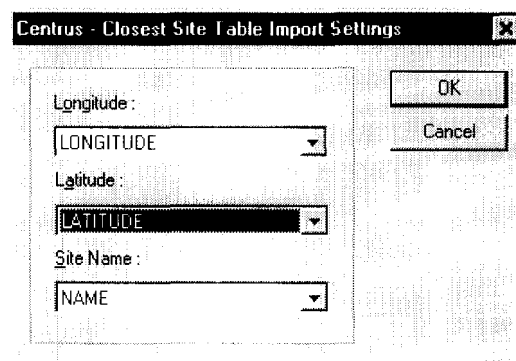


The imported file is added to the list of Point-in-Polygon layers. Click **OK** to see the successfully imported Point-in-Polygon layer.

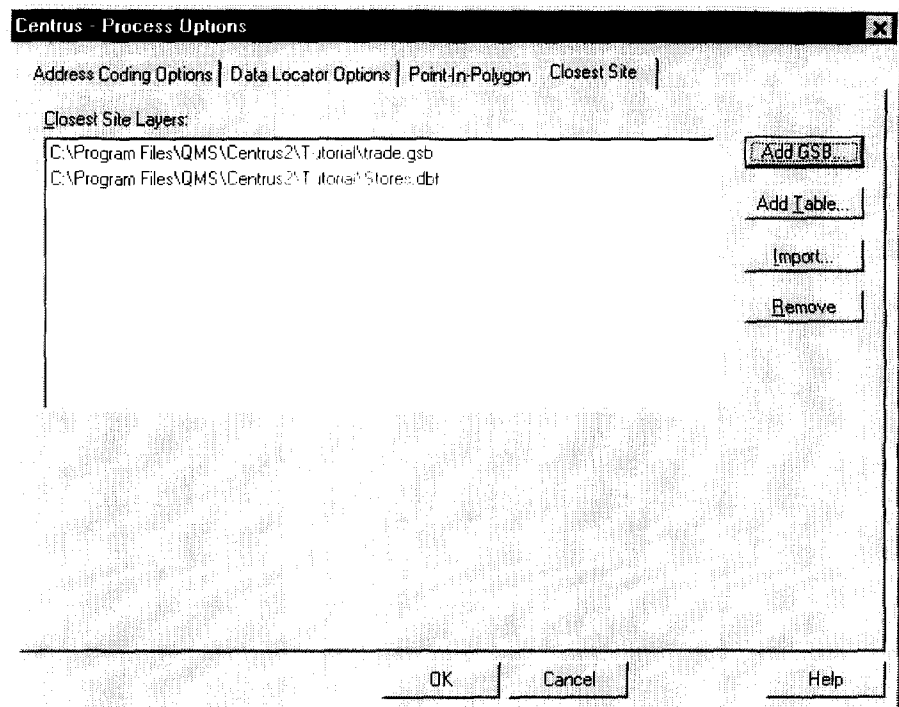


### To Import Closest Site Layers

1. Click the **Closest Site** tab on the Process Options dialog.
2. Click the **Add GSB** button. The Select Layers File Dialog will appear. Select the file **Trade.gsb** from the **\Tutorial** directory, then click the **Open** button.
3. Click the **Add Table** button. The Select File to Process dialog will appear. Select the geocoded table called **Stores.dbf** from the **\Tutorial** directory, then click the **Open** button. The Closest Site Table Import Settings dialog will appear.
4. You should see Latitude, Longitude, and Name listed in the appropriate field boxes. Click **OK** to import the table.



5. The added layers should now appear on the list of Closest Site layers. Click **OK** to return to the Centrus Desktop.



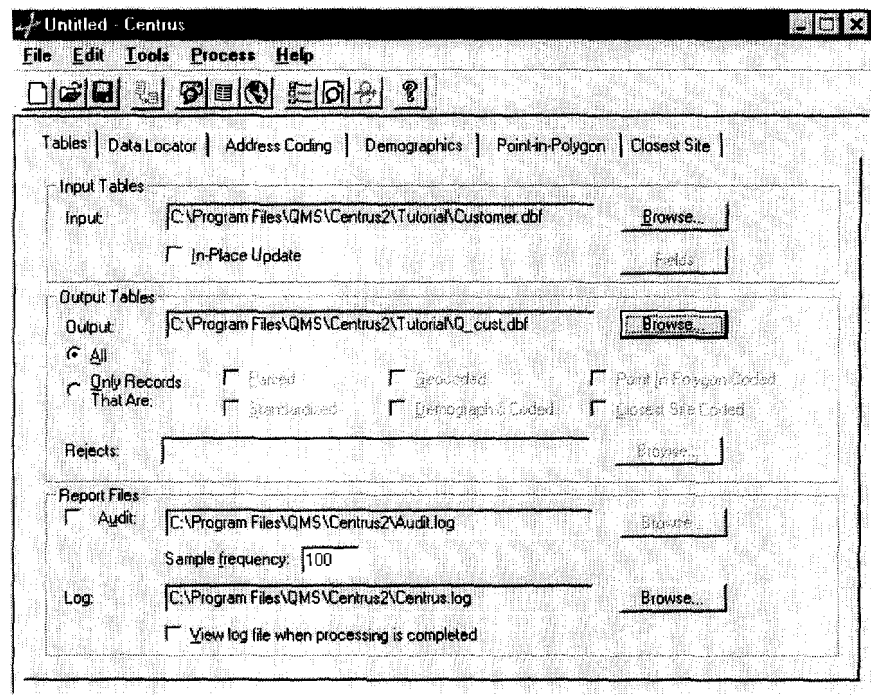
## Setting up a Task

Note that there are five tabs on the Centrus Desktop: one tab for each Centrus component, as well as a Tables tab for specifying input and output files and tables. Each component's tab allows you to define exactly how you want that module to process your data. Collectively, these settings constitute a *task*. Tasks are to Centrus what documents are to your word processing software. You can create them, save them, edit them, and rename them.

## Open Input and Output Tables

The Tables tab is where you select the input file and (if desired) the output, reject, and report files. Note that you cannot type file names directly into the file name boxes. Instead, click the **Browse** button to select the path and file names in file selection dialogs.

1. In the **Input Tables** section, click the **Browse** button and select the file **Customer.dbf**.
2. In the **Output Tables** section, click the **Browse** button and create an output table called **Q\_cust.dbf**.

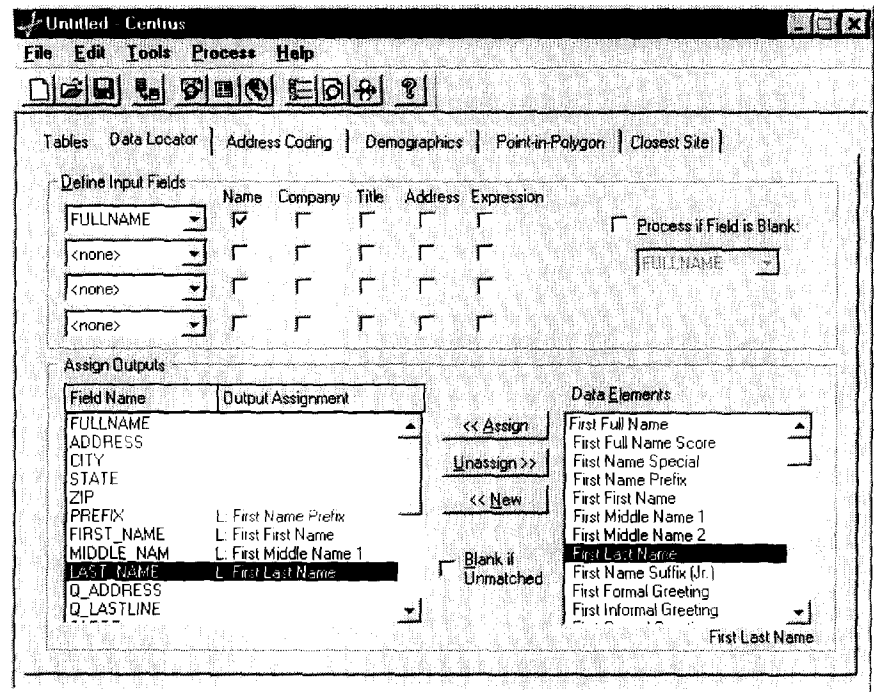


## Specify Data Locator Inputs and Outputs

The Data Locator module is designed to let you take full advantage of the name information in your databases. It uses Qualitative Marketing Software's proprietary name parsing technology to analyze databases, identify and extract name elements, and add a variety of name-related information.

In this example, we will to identify name components for each record and generate appropriate greetings.

1. On the *Define Input Fields* section of the Data Locator tab, click the arrow next to the first list box to see available input fields. Select the input field called **FULLNAME**, then check the **Name** box.
2. On the *Assign Outputs* section, select the **PREFIX** field from the list of *Field Names*. Select **First Name Prefix** from the *Date Elements* list. Click the **Assign** button to create the assignment.
3. In the same manner, assign **First First Name** to **FIRST\_NAME**, **First Middle Name** to **MIDDLE\_NAME** and **First Last Name** to **LAST\_NAME 1**.



## Specify Address Coding Inputs and Outputs

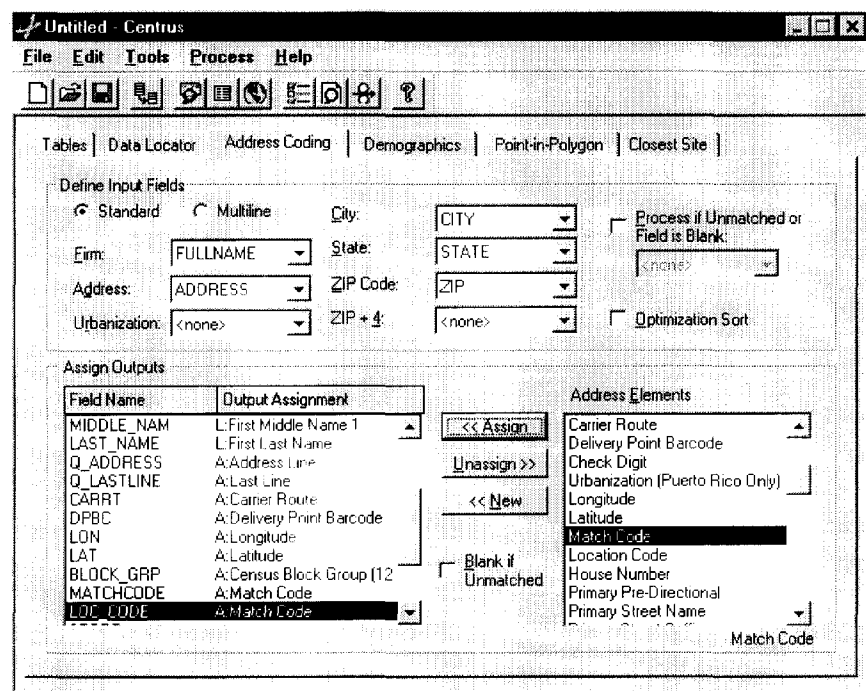
The Address Coding module is a complete address standardization and geocoding solution that you can use to enhance any database containing address information. In our example, we will standardize each record's address line and lastline information, geocode the corrected addresses, and add USPS delivery fields: Census Block codes, match codes, and location codes.<sup>1</sup>

The Address Coding module will automatically define the input fields for you. For most files, checking the box for Optimization Sort will significantly speed processing by processing the file in ZIP Code sequence. Because the addresses in the example file are limited to the Boulder, Colorado area, Optimization Sort will have little effect.

<sup>1</sup> Match codes indicate what elements of an address were unmatched, in the case of a "no match", or which elements of an address were modified to find a match. Location codes indicate the accuracy of the assigned geocode.

In the *Assign Outputs* section of the Address Coding tab, make the following assignments:

<u>Field Name</u>		<u>Address Element</u>
Q_ADDRESS	←	Address Line
Q_LASTLINE	←	Lastline
CARRT	←	Carrier Route
DPBC	←	Delivery Point Bar Code
LON	←	Longitude
LAT	←	Latitude
MATCHCODE	←	Match Code
LOC_CODE	←	Location Code
BLOCK_GRP	←	Census Block Group (12 Digits)



## Specify Demographic Inputs and Outputs

The Centrus Demographic Coding module allows you to append valuable demographic information to your own databases. In this example, we'll add measure of median household income and median housing value to each record.

To use this module, the file **Census90.dld** must be in your search path (as specified in the File/Configuration dialog). This file is located on the Supplementary Data CD-ROM. If no data elements are listed under *Available Outputs*, be sure that the file Census90.dld is in one of the locations specified in the Centrus Configuration dialog. You may need to insert the Supplemental Data CD-ROM, or copy the file from the CD-ROM to the Centrus directory on your hard drive.

If your paths are correctly configured, the Demographics tab will show the Block Group box enabled with the input field name **BLOCK\_GRP** filled in.

In the *Assign Outputs* section of the Demographics tab, make the following assignments:

<u>Field Name</u>		<u>Available Demographics</u>
MEDHHI90	←	1990 MEDIAN HOUSEHOLD INCOME
MEDHOMEV90	←	1990 MEDIAN HOUSING VALUE

The screenshot shows the 'Demographics' tab in the Centrus Desktop application. The window title is 'Untitled - Centrus'. The menu bar includes 'File', 'Edit', 'Tools', 'Process', and 'Help'. Below the menu bar is a toolbar with various icons. The main window is divided into several sections:

- Define Input Fields:** This section contains dropdown menus for 'County', 'Census Tract', 'Block Group', 'Block', 'Zip', and 'Zip+4'. The 'Block Group' dropdown is set to 'BLOCK\_GRP'. There is also a checkbox for 'Process if Field is Blank:' and a 'FULL NAME' dropdown.
- Assign Outputs:** This section contains a table with 'Field Name' and 'Output Assignment' columns. The 'Field Name' column lists various fields including 'DPBC', 'LON', 'LAT', 'BLOCK\_GRP', 'MATCHCODE', 'LOC\_CODE', 'STORE', 'DIST2STORE', 'TRADE\_AREA', 'MEDHHI90', and 'MEDHOMEV90'. The 'Output Assignment' column shows the corresponding assignments, such as 'A: Delivery Point Barcode' for 'DPBC' and 'D: 1990 MEDIAN HOUSEHOLD INCOME' for 'MEDHHI90'. There are buttons for '<< Assign', 'Unassign >>', and '<< New'. A checkbox for 'Blank if Unmatched' is also present.
- Available Demographics:** This section lists a variety of demographic data points, including '1990 MEDIAN AGE FEMALE', '1990 MEDIAN AGE MALE', '1990 TOTAL HOUSING UNITS', '1990 FAMILIES', '1990 AVERAGE HOUSEHOLD', '1990 AGGREGATE HH (\$000'S)', '1990 MEDIAN HOUSEHOLD IN', '1990 MEDIAN FAMILY INCOME', '1990 MEDIAN HOUSING VALUE', '1990 POP IN GROUP QUARTER', '1990 % WHITE POPULATION', and '1990 MEDIAN HOUSING VALUE'.

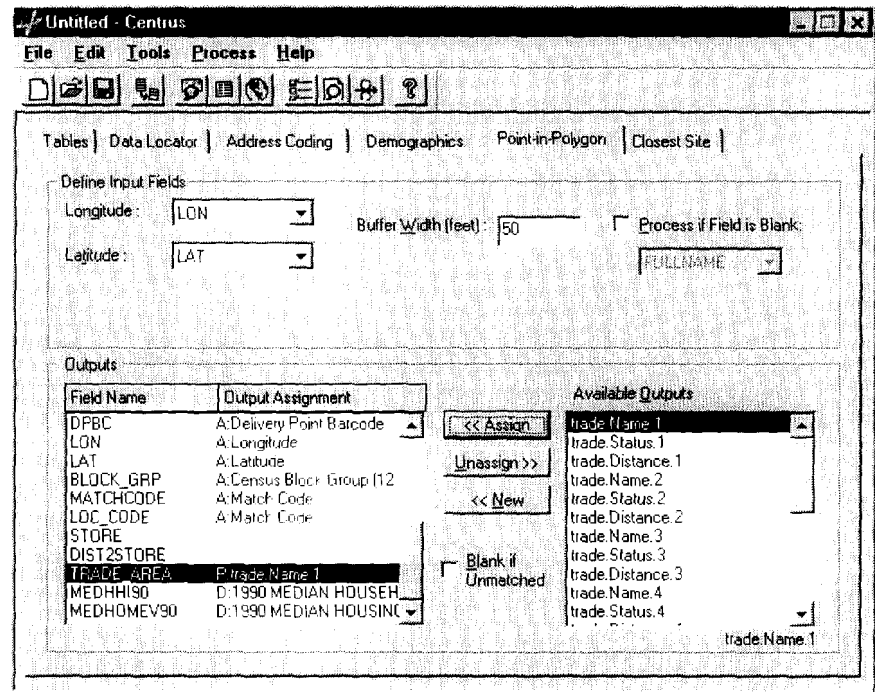
## Specify Point-in-Polygon Inputs and Outputs

Point-in-Polygon analysis determines in which object, or objects, a point falls in. Point-in-Polygon module can perform analyses on polygons, as well as buffered lines, buffered points and buffered polygons. In this example, we'll use Point-in-Polygon analysis to determine whether addresses fall within store trade areas.

Centrus automatically fills in the **Latitude** and **Longitude** input fields for you, based on the assignments you made in the Address Coding tab.

In the *Outputs* section of the Point-in-Polygon tab, make the following assignment:

<b>Field Name</b>		<b>Available Outputs</b>
TRADE_AREA	←	trade.Name.1



## Specify Closest Site Inputs and Outputs

Closest site analysis compares the geocoded addresses (or other points) in your input file to the geocoded site layer you specified in the Closest Site Options tab. Centrus can identify the closest sites for each point in the input file. The site's identifier and the straight-line distance to the site can be returned for each site found. In this example, we'll use Closest Site analysis to find store locations near our customers.

Centrus automatically fills in the **Latitude** and **Longitude** input fields for you, based on the assignments you made in the Address Coding tab.

**Max Distance** is the distance to search from each record in the customer file. Set this to "50". If Max Distance is set to "0", you won't find any store locations near your customers!



In the *Assign Outputs* section of the Closest Site tab, make the following assignments: (Available Outputs from trade.gsb will be listed first. Scroll down to the stores.dbf fields.)

<u>Field Name</u>		<u>Available Outputs</u>
STORE	←	Stores.Name.1
DIST2STORE	←	Stores.Distance.1

Untitled - Centrus

File Edit Tools Process Help

Tables | Data Locator | Address Coding | Demographics | Point-in-Polygon | Closest Site

Define Input Fields

Longitude: LON Max Distance (Miles): 5.000000 Process if Field is Blank: ☒ FULLNAME

Latitude: LAT

Assign Outputs

Field Name	Output Assignment
DPBC	A:Delivery Point Barcode
LON	A:Longitude
LAT	A:Latitude
BLOCK_GRP	A:Census Block Group 112
MATCHCODE	A:Match Code
LOC_CODE	A:Match Code
STORE	C:Stores.Name.1
DIST2STORE	C:Stores.Distance.1
TRADE_AREA	P:trade.Name.1
MEDHHI90	D:1990 MEDIAN HOUSEH.
MEDHOMEV90	D:1990 MEDIAN HOUSEH.

Available Outputs

trade.Direction.6  
trade.Name.7  
trade.Distance.7  
trade.Direction.7  
trade.Name.8  
trade.Distance.8  
trade.Direction.8  
Stores.Name.1  
Stores.Distance.1  
Stores.Direction.1  
Stores.Name.2  
Stores.Distance.1

<< Assign Unassign >> << New Blank if Unmatched

## Processing a Task

Once you've selected an input file, set the processing options, and specified the input and output fields for the modules you are using, Centrus is ready to begin processing.

1. From the main Centrus menu, select **Process**, then choose **Process Task**. (**Batch Process Task** is not available in demo mode.) You will see the first record in your file
2. Click each of the tabs to see the results of each of the processes you have set up.

**Centrus - Process**

Data Locator | Address Coding | Demographics | Point-In-Polygon | Closest Site

Input Address

Firm: Abbott B G

Address: 8100 Kinross Dr

Last Line: Boulder CO 80301

Results

Outputs

Address Line: 8100 KINCROSS DR  
 Last Line: BOULDER, CO 80301-4227  
 Carrier Route: C005  
 Delivery Point Barcode: 00  
 Longitude: -105.159698

Records

Standardized: 0  
 Geocoded: 0  
 Forwarded: 0

Current: 1 of 25

Time: 00:01 Time To Complete:

Buttons: Find, Next Error, Batch, Next, Previous, Goto..., Reload, Query..., Map..., View..., Cancel, Help

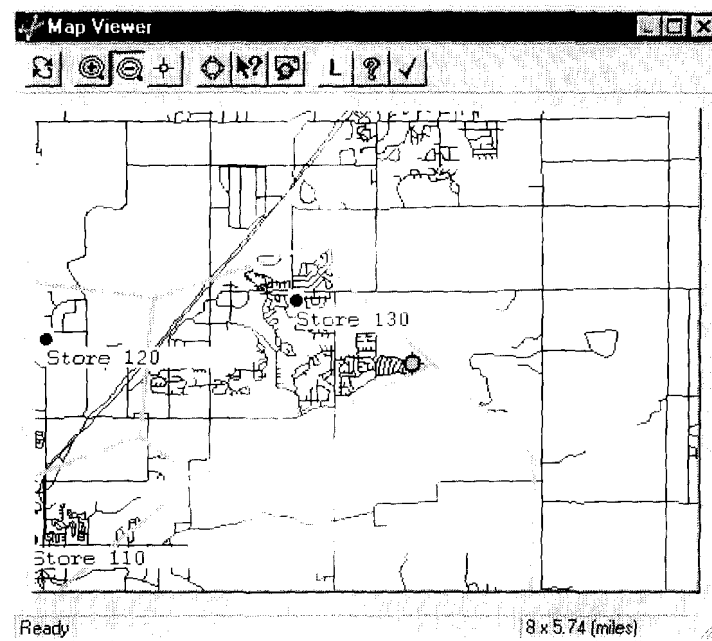
- Click the **View** button to see all processing results for the current record.



**Centrus - Data Viewer**

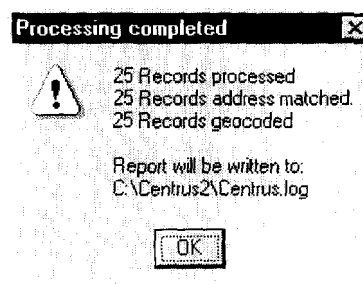
Field Name	Value
FULLNAME	Abbott B G
ADDRESS	8100 Kinross Dr
CITY	Boulder
STATE	CO
ZIP	80301
PREFIX	
FIRST_NAME	B
MIDDLE_NAME	G
LAST_NAME	Abbott
Q_ADDRESS	8100 KINCROSS DR
Q_LASTLINE	BOULDER, CO 80301-4227
CARRT	C005
DPBC	00
LON	-105.159698
LAT	40.060182
BLOCK_GRP	03 013 0127 06-3
MATCHCODE	530
LOC_CODE	450
STORE	Store 130
DIST2STORE	1.565
TRADE_AREA	Trade Area 130
MEDHHIS0	54943
MEDHOMEV90	12314

Navigation: << < > >> OK

- Click the **Map** button to see the first record plotted on the a street network.



5. In the Map Viewer, click  to “zoom out” for a better view of the relationship between the record being processed, store trade areas, and the store locations.
6. Click the  button to close the Map Viewer, then click the **Batch** button to process the rest of the file. When all records have been processed, a dialog will appear telling you that processing has completed.



7. Click **OK**, then close the Process dialog by clicking the **Done** button.
- Congratulations! You have successfully completed the Centrus Desktop tutorial!

# Chapter 3

## Configuring Centrus Desktop

### Installing Centrus Desktop

Centrus Desktop is designed to be easy to use. You may feel tempted to jump right in and start working immediately. However, a few minutes spent tailoring Centrus Desktop to meet your needs will pay big rewards later.

The Centrus software package includes three CD-ROMs—one installation disc, and two data discs. If you have not yet installed Centrus, do so now. Simply insert the installation disc into your CD-ROM drive and wait several seconds. Windows should automatically start the QMSetup program. If the “Autorun” feature is disabled on your machine, start QMSetup by selecting **Run** from the Windows Start menu, then typing: **D:\QMSetup.exe**. (Replace the letter “D” with the letter of your CD-ROM drive.)

Follow the on-screen prompts to complete the installation. If you are updating from an earlier version, the setup program will recognize this and prompt you with the recommended action. You may also be prompted to insert the diskette containing your license file. If you don’t have a license file, don’t worry—Centrus will automatically enable demo mode.

For additional information on installing Centrus Desktop on your platform, refer to the installation notes that came with the CD-ROMs.

*For more information about running Centrus in demo mode, see “License Files” on page 20.*

### Improving Performance

If you have approximately 5 MB available on your hard drive, you can dramatically improve performance by copying certain files from the CD-ROM to your hard drive. These files are located in the root directory of the Primary Data CD-ROM and have file name extensions of .DAT, .DIR, .LAS and .LOS. Simply copy these files from the primary data CD-ROM to the Centrus program directory or data directory. If you copy any files to directories other than the Centrus Desktop directories, you will need to specify the location of those files in the Setup dialog.

If you have approximately 600MB available on your hard drive, you can further speed processing by copying the files US.GSD and US.Z9 to your hard drive. To create geographic subsets from these files, see “GSD Split for Windows” on page 123.

If you plan to use the Demographics module, you may want to copy the file Census90.dld (10 MB) from the Supplemental Data CD-ROM to your hard

drive. Similarly, any premium demographics files you have licensed may be copied to your hard drive. These files are located on the Supplemental Data CD-ROM, and have the file name extension .DLD.

---

Remember, If you copy any files to directories other than the Centrus Desktop directories, you need to specify the location of those files in the Configuration dialog

---

## License Files

Centrus Desktop uses a license file to determine the functionality, geographic areas, and demographics available for your use.

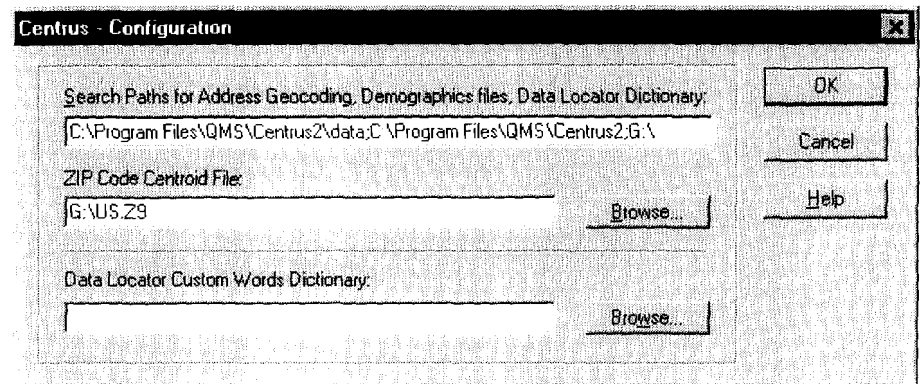
Each module is licensed separately. Point-in-Polygon and Closest Site analysis are licensed as one module. Address coding is licensed by geography and data source (GDT/TIGER). *CentrusCOA* requires a license plus the dedicated USPS *FASTforward* computer. Demographics are licensed by data source (Claritas/NDS) except for Census data, which is included free with all Centrus Desktop installations.

Only the controls for your licensed functionality are enabled. If you want to examine modules for which you have no license, you can run Centrus Desktop in demonstration mode. In demo mode, all modules except *CentrusCOA* are fully accessible. Processing is limited to interactive processing of 25 records per job, and you cannot produce a CASS report. A demo mode icon is installed with Centrus Desktop and appears on your Windows Start menu. Click this icon to start Centrus Desktop in demo mode. If you prefer to run Centrus Desktop from the command line, add the switch `/d` to invoke demo mode.

## Configuring Centrus Desktop

Certain Centrus data files are required for processing and need to be in your search path. These files are located in the root directory of the Primary Data CD-ROM and have file name extensions of .DAT, DIR, .GSD, .Z9, .LAS, and .LOS. (Note that the demographic data files are located on the Supplementary Data CD-ROM. These files have file name extensions of .DLD.)

If you will be accessing all Centrus data files from the Centrus program directory or CD-ROM, the search paths were configured during installation. However, if these files are located in a different directory, you'll see a **Configuration** screen the first time you start Centrus Desktop:



## Specifying File Paths

The Configuration dialog is where you specify paths for Centrus data files. To open the Configuration dialog, select **File** from the menu, then choose **Configuration**.

### Search Path For Address Geocoding

The *Search Path for Address Geocoding, Demographics files, Data Locator Dictionary* box lists the directory paths where Centrus files are located. It should begin with the Centrus Desktop program and data directories, and include the directory or drive where the \*.DAT, \*.ISD, \*.DIR, \*.GSD, \*.Z9, \*.LAS, \*.LOS, and \*.DLD data files are located—usually the CD-ROM drive.

The default directory paths are **C:\Program Files\Centrus** and **C:\Program Files\Centrus\Data**. List as many additional directories as needed, each separated by a semicolon. The paths are searched in the order listed, so list hard drive paths first, since they are fastest. List the slower CD-ROM drive last. In the dialog shown above, the program is installed in C:\Program Files\QMS\Centrus2. The Centrus Desktop CD-ROM, containing the address standardization and geocoding files (also called GSD files), is in drive G:

### ZIP Code Centroid File

Clicking the *ZIP Code Centroid File* **Browse** button displays a file selection dialog. The ZIP Code Centroid file is also located on the CD-ROM and is named **US.Z9**. Select this file from the CD-ROM, or from the hard drive if you've copied the file.

### Data Locator Custom Words Dictionary

The *Data Locator Custom Words Dictionary* is a user-defined custom dictionary file, **Custom.isd**. It is usually located in the Centrus data directory below the main Centrus program directory. From the Configuration dialog, click the **Browse** button to display a file selection dialog, then select **Custom.isd**.

The Data Locator module uses the custom word dictionary to add your custom dictionary entries to its own list of terms. For more information, see “Custom Dictionaries In Data Locator” on page 111.

---

The file **Words.isd** is the Data Locator’s internal dictionary. It is loaded automatically if you are licensed for the Data Locator module. **Do not** specify this file as the *Data Locator Custom Words Dictionary*.


---

## Setting Up Tasks

Once you’ve configured Centrus for your system, you’re ready to set up tasks. Note that there are five tabs on the Centrus Desktop: one tab for each Centrus component, as well as a *Tables* tab for specifying input and output files and tables. Each component’s tab allows you to define exactly how you want that module to process your data. Collectively, these settings constitute a *task*. Tasks are to Centrus Desktop what documents are to your word processing software. You can create them, save them, edit them, and rename them. By default, your tasks are stored in the Centrus program directory. They are required to have the file name extension **.QMI**.


The default settings for all Centrus modules are stored in the file **Centrus.QMI**, located in your Windows directory. You can set new defaults by simply overwriting this file with your own task file.

### Creating a New Task


If you want to create a new task, click the  button or select **File|New**. If you already have an unsaved task open, you’ll be prompted to save it.

When you open Centrus Desktop, an “empty” new task is automatically created.

### Saving a Task

To save a task, click the  button or select **File|Save**. You’ll be prompted to assign a name to the task.

### Opening a Task

To open an existing task, click the  button or select **File|Open**. Select the desired task using the file selection dialog.

To open a task you’ve used recently, click its name at the bottom of the **File** menu.

### Editing a Task


It’s often easier to edit a previously defined task than to define a new one. Simply open an existing task and change the settings to suit your preferences. If you specify a new input table within a previously defined

task, Centrus Desktop will attempt to map output fields to the new input fields.

If you prefer to redefine some or all of your output fields, Centrus Desktop makes this easy. From the **Edit** menu, you can choose to:

- Clear output fields within the current module.
- Clear outputs fields in all modules.
- Clear outputs fields in all modules *except* the current module.

---

Click the  button to clear previously defined outputs within the current module.


---

## Renaming a Task

To rename a task, select **File**, then **Save As**. You'll be prompted to assign a new name to the task.

## Setting Options

You define the behavior of each Centrus Desktop component in the Options dialog.

To set options, click the  button or select **Process|Options**. The Options dialog will appear, with a tab for each component. You access a component's options by clicking on its tab. Option settings are “sticky”—that is, when Centrus Desktop is started, these options are set to the most recently used settings.

### Address Coding Options Tab

The *Address Coding* options tab contains settings that determine the way Centrus Desktop matches addresses and the format of the information that is returned. These settings can often remain the same for processing different address files.

### Geocoding Options

Centrus Desktop standardizes addresses and assigns address or ZIP+4 geocodes. The settings in this section determine the quality of matches and geocodes to be used, as well as how the information is to be presented. While these settings generally can remain the same from task to task, different uses may require different settings.



The image shows a screenshot of the 'Centrus - Process Options' dialog box. It has a title bar with a close button. Below the title bar are four tabs: 'Address Coding Options', 'Data Locator Options', 'Point-In-Polygon', and 'Closest Site'. The 'Address Coding Options' tab is selected. Inside this tab, there is a section for 'Geocoding Options' with the following settings:
 

- ☒ Address Matching: Matching Tolerance: Close (dropdown)
- ☒ ZIP Centroid Matching: Minimum Quality: Best Centroid (dropdown)
- ☒ Negate Longitudes: Census ID Format: Census (dropdown)
- ☐ Allow Census ID even if only based on 5 digit ZIP Code Centroid
- Return coordinates in: ☒ NAD 27 ☐ NAD 83

 Below the Geocoding section is another section for 'Address Coding Options' with:
 

- ☐ Mixed Case Output Addresses
- ☐ Produce USPS 3553 (CASS) Report
- Cass Report File: [text field] [Browse button]
- ☐ Process Change of Address

 At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help'.

## Address Matching

When the **Address Matching** check box is selected, Centrus will perform address standardization and address geocoding. The setting indicates the type of match that is required. The possible settings for **Matching Tolerance** are:

- **Tight**—This setting requires that addresses are virtually an exact match. We recommend using **Tight** only when the addresses have already been standardized to USPS standards. This is the fastest option.
- **Close**—This is the setting we recommend for most uses. It allows minor misspellings, as well as incorrect or missing directionals or street types. This is the default setting.
- **Extended**—This setting is similar to Close, except that the street name search looks at all streets that have the same first letter, rather than using pattern matching. This setting also performs the widest search possible, using the USPS Finance Area. We recommend that you review all matches made by this setting in which the street name was modified. You can do this via the Match Code. (See “Reference System Messages and Codes” on page 101 for more information about Match Codes.) This is the slowest setting.
- **CASS**—This setting is used to insure CASS compliance and is required when producing a CASS report. With this setting, some addresses that could be successfully coded using the Close or Extended settings may be skipped.

## ZIP Centroid Matching

When the **ZIP Centroid Matching** check box is selected, Centrus will provide a ZIP+4, ZIP+2 or ZIP Code centroid geocode when an address geocode is not available. The **Minimum Quality** setting indicates which type of centroids are used. The best possible centroid is always used if multiple centroids are available. The possible settings are:

- **9 Digit Best Location**—This setting will use the most positionally accurate 9-digit centroids. These centroids are almost as accurate as an address geocode, in that they are accurate to a single block face in most cases. Census accuracy varies, but most centroids in this class are accurate to the Block Group level.
- **9 Digit Good Location**—This setting will use 9-digit centroids with very good positional accuracy. These centroids are accurate to a single block face in most cases. Census accuracy varies, but most centroids in this class are accurate to the Block Group or Census Tract level.
- **9 or 7 Digit Location**—This setting will use all 9 or 7 digit centroids. A 7 digit centroid is positionally accurate to within several blocks in most areas. Census accuracy varies. This setting will yield all but 5 digit centroids.
- **Block Group Accuracy**—This setting will use centroids that are accurate to the Block Group level. Positional accuracy varies, but is normally accurate to the city block on which the address is located.
- **Census Tract Accuracy**—This setting will use centroids that are accurate to the Census Tract level. Positional accuracy varies, but is normally accurate to within several city blocks of where the address is located.
- **5 Digit Only**—This setting uses only 5-digit centroids. This is the least accurate geocode, but it is the fastest to assign.
- **Best Centroid**—This setting uses the best centroid, but all centroids are available. This is the default setting.

Refer to “Location Codes” on page 103 for a complete listing of the location codes and settings assigned to each centroid type.

## Negate Longitudes

When the **Negate Longitudes** check box is selected, longitudes are returned as negative numbers. When the check box is cleared, longitudes are returned as positive numbers. Latitudes are always returned as positive numbers.

This option is available to support those applications that require positive longitudes. Most mapping and GIS applications today use negative longitudes for western hemisphere locations.

## Census ID Format

The **Census ID Format** option determines the format of the Census FIPS Code. The possible formats are listed below with an example of how a Block Group would be displayed.

<b>Delimited</b>	08 013 0002.01-1
<b>Census</b>	080130002.011
<b>Digits Only</b>	080130002011

**Census** is the default setting

## Allow Census ID even if only based on 5 digit ZIP Code Centroid

When selected, this check box permits the assignment of the Census FIPS Code even when only 5-digit ZIP Code centroids are available. The default setting of this check box is cleared.

## Return coordinates in NAD 27 or NAD 83

This option lets you select which datum Centrus uses to return the latitude and longitude of an address. A datum is the mathematical model of the Earth used to calculate the coordinates on any map, chart, or survey system. Surveyors take an ellipsoid model of the Earth and fix it to a base point. The North American Datum (NAD) is the official reference ellipsoid used for the primary geodetic network in North America. Two NADs have been developed:

- NAD27 has its origin at Meades Ranch, Kansas. NAD 27 does not include Alaskan islands and Hawaii. Latitudes and longitudes that are surveyed in the NAD27 system are valid only in reference to NAD27 and do not tie to any maps outside the U.S.
- NAD83 is earth-centered and defined with satellite and terrestrial data. NAD83 is compatible with the World Geodetic System 1984 (WGS84), the terrestrial reference frame associated with the NAVSTAR Global Positioning System (GPS) now used extensively for navigation and surveying.

The coordinates for a point on the Earth's surface in one datum will not match the coordinates from another datum for that same point. A grid shift exists between datums because each datum has a different origin. For example, according to NAD27, the center of the intersection of Baseline Road and County Line Road near Boulder, Colorado is exactly 40 N. Latitude, 105 W. Longitude. But according to NAD83, that point is located at 39deg 59min 59.97sec N, 105deg 00min 01.93sec W. This is four feet south and fifty feet west from 40 N, 105 W.

Note that this option affects only the numeric coordinates returned for the latitude and longitude of an address. QuickFind's mapping function and the spatial analysis functions chart addresses based on the database you have licensed, rather than the NAD option selected.

## Address Coding Options

The *Address Coding Options* dictate how an address will be returned and whether a CASS report will be generated.

## Mixed Case Output Addresses

Normally, addresses are returned in uppercase letters, as per U.S. Postal Service recommendations. If the **Mixed Case Output Addresses** check box is selected, addresses are returned with the first letter of each word capitalized.

## Produce USPS 3553 (CASS) Report

Commonly referred to as the CASS report, this report is filed with bulk mailings in order to receive postal discounts.

When the **Produce USPS 3553 (CASS) Report** check box is selected, Centrus produces a text file containing the report information. Specify the name and location of this file by clicking the **Browse...** button and entering the path and name in the file selection dialog.

The address file is processed in strict accordance with CASS guidelines. In order to be CASS-compliant, the following settings must be present:

- Address fields must be updated during processing or alternate address output fields must specified.
- Output fields for **Carrier Route**, **DPBC** and **Check Digit** must be present.
- **Address Matching** is checked and the **Matching Tolerance** setting is set to CASS. (This is done automatically when you check the **Produce USPS 3553 (CASS) Report** option.)
- The **Unmatched Records Only** check box in the *Address Coding* tab is ignored. All records must be processed in order to derive accurate coding counts for the reports.

When processing is complete, the CASS Report will be displayed in Windows Notepad, if it is available. Please see “CASS Report and Bulk Rate Information” on page 131 for more information on the CASS Report.

## Process Change of Address

To make CentrusCOA address forwarding available within the Address Coding module, check the **Process Change of Address** box at the bottom of the *Address Coding Options* section. Address Coding options are automatically changed to CASS settings, and CentrusCOA output fields are added to the list of available output fields.

This control is available **only** if you are licensed for CentrusCOA **and** have a USPS *FASTforward* computer installed and operating.

**Centrus - Process Options**

Address Coding Options | Data Locator Options | Point-In-Polygon | Closest Site

**Geocoding Options**

☐ Address Matching      Matching Tolerance:

☒ ZIP Centroid Matching      Minimum Quality:

☐ Negate Longitudes      Census ID Format:

☐ Allow Census ID even if only based on 5 digit ZIP Code Centroid

Return coordinates in: ☒ NAD 27    ☐ NAD 83

**Address Coding Options**

☐ Mixed Case Output Addresses    ☒ Produce USPS 9553 (CASS) Report

Cass Report File:

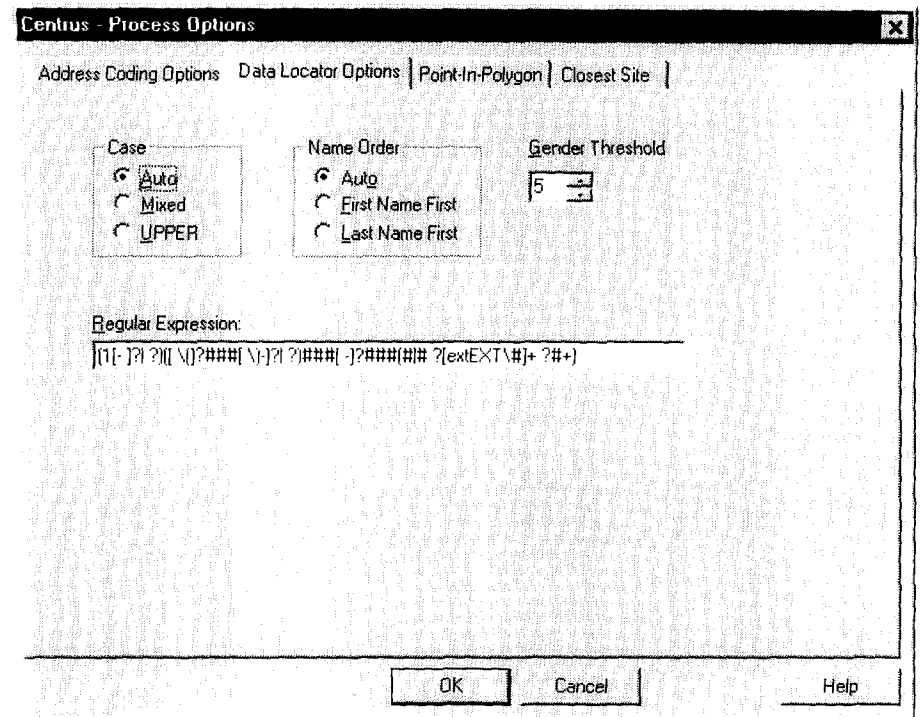
☒ Process Change of Address

Note that when you clear the **Process Change of Address** box, Address Coding options are not restored to their previous settings. They remain set to CASS standards until you change them or open a task with different settings.

Remember that CentrusCOA controls are not available unless the *FASTforward* computer has been turned on and is connected to the Centrus host computer.

## Data Locator Options Tab

The *Data Locator* options tab contains settings that determine how the Data Locator module assigns gender information to names, as well as the format in which the names are returned



## Case

This option determines how names will be capitalized in output.

- **Auto**—If mixed case is found in the original, the exact original capitalization is preserved in the output. Otherwise, Data Locator uses mixed case, capitalizing the first letter of each word. This is the default setting.
- **Mixed**—Converts all names to mixed case, capitalizing the first letter of each word.
- **UPPER**—Converts all names to upper case. For CASS certification, names must be in upper case letters.

## Name Order Options

This option determines the order in which name elements are returned in output.

- **Auto**—The Data Locator module determines word order based on context. This is the default setting.
- **First Name First**—Always puts the first name first, and last name last.
- **Last Name First**—Always puts the last name first.

## Gender Threshold Option

This setting represents the error threshold for the assignment of gender to a name. It is measured as the distance away from 100% female or 100% male.

For example, a threshold of 5 (the default setting) will allow a name that is male 95% of the time to be assigned a “Mr”.

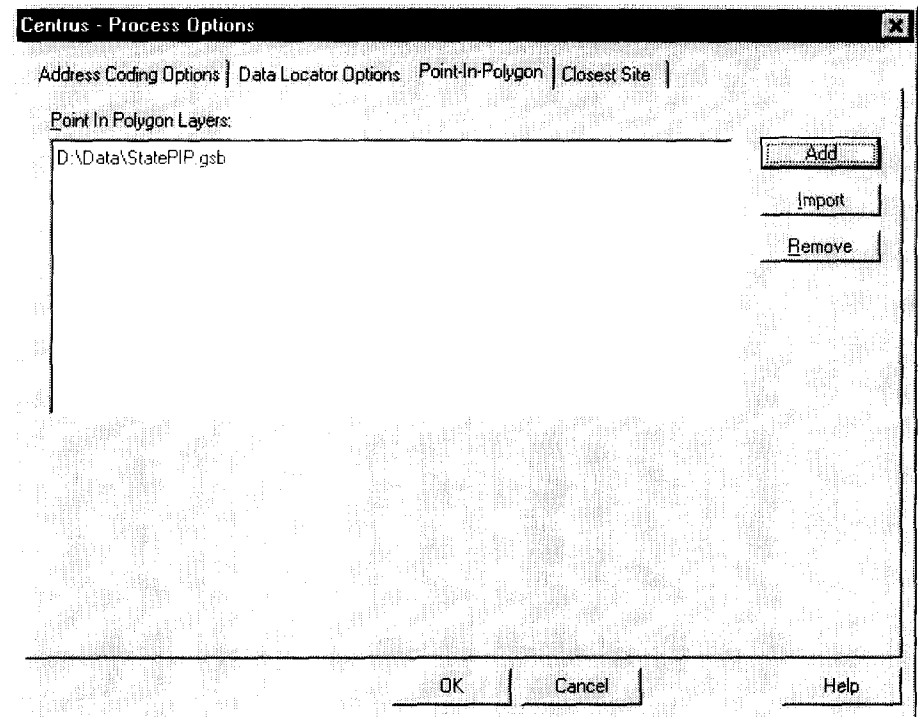
### **Regular Expression**

A regular expression is a pattern that describes a set of ASCII strings. It can be used in the Data Locator module to identify information such as email addresses, Social Security numbers, and telephone numbers (the default setting). For more information about regular expressions, see “Customizing the Data Locator Module” on page 109.

### **Point-in-Polygon Options Tab**

You determine which data layers are available to the Point-in-Polygon module in the Point-in-Polygon options tab. You can add data layers that are already in .GSB format, such as the States.gsb and Counties.gsb files located on the primary data CD-ROM. You can also import layers from either MapInfo (.MIF/.MID files) or ESRI's Atlas GIS (.BNA files). Note that data layers must be built with buffers enabled for use with the Point-in-Polygon function. For more information about buffering, see “

Point-in-Polygon Analysis” on page 89.



### Adding Point-in-Polygon Layers

To add layers:

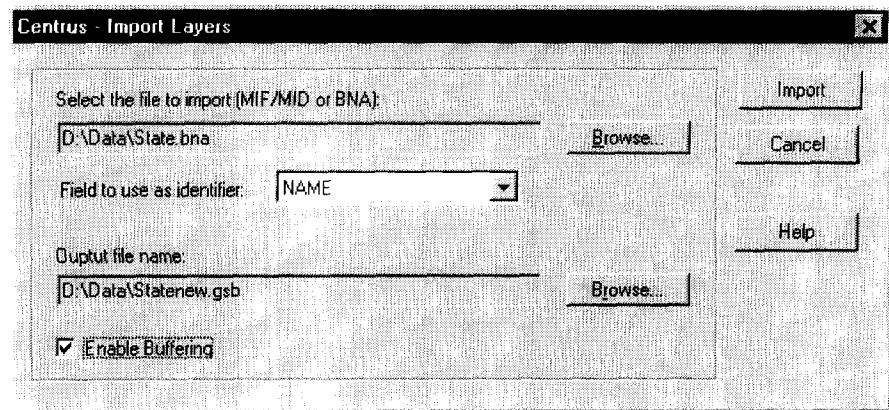
1. Select **Options** from the **Process** menu, then click the *Point-in-Polygon* tab.
2. Click the **Add** button. A file selection dialog will appear.
3. Select the desired file name, then click **OK**.

### Importing Point-in-Polygon Layers

To import layers:

1. Select **Options** from the **Process** menu, then click the *Point-in-Polygon* tab.
2. Click the **Import** button. The Import Layers dialog will appear.





3. Click the **Browse** buttons to select the path and name of the .MIF/.MID or .BNA file to import and the object file (.GSB) to create.
4. When importing, you can determine which field is used as the object's identifier. Click the drop-down list box to select which **Field to use as identifier**.
5. Be sure that the **Enable Buffering** box is checked.
6. Click **Import** to finish

---

Remember that while western hemisphere locations are correctly expressed as negative longitudes, some mapping and GIS applications still return longitudes as positive numbers. Be sure that the longitude data in your imported layer is consistent with that of your address file!

---

## Removing Point-in-Polygon Layers

To remove layers:

1. Select **Options** from the **Process** menu, then click the *Point-in-Polygon* tab.
2. Select the file you want to remove from the list of *Point-in-Polygon Layers*, then click **Remove**

## Closest Site Options Tab

The *Closest Site* options tab is where you determine which data layers are available to the Closest Site module. You can add data layers that are already in .GSB format, such as the States.gsb and Counties.gsb files located on the primary data CD-ROM. You can also import geocoded tables from database files, or import layers from either MapInfo (.MIF/.MID files) or ESRI's Atlas GIS (.BNA files).

## Adding Closest Site Layers From a .GSB File

To add layers from a .GSB file:

1. Select **Options** from the **Process** menu, then click the *Closest Site* tab.
2. Click the **Add GSB** button. A file selection dialog will appear.